
A New Species of *Leptochloa* (Poaceae, Chloridoideae) from Sri Lanka

Neil Snow

Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166-0299, U.S.A. Current address: Department of Biological Sciences, University of Northern Colorado, Greeley, Colorado 80639, U.S. A.

ABSTRACT. *Leptochloa srilankensis* N. Snow is described and diagnosed from the morphologically similar *L. decipiens* subsp. *asthenes* (formerly *L. ciliolata*) and previously misidentified specimens of *L. panicea* subsp. *panicea*. The species is restricted to Sri Lanka and is known from only five collections.

An undescribed species of *Leptochloa* P. Beauvois from Sri Lanka has become apparent during preparation of a recent monograph of the genus (Snow, 1997). Sufficient loan material has been seen now to verify its morphological distinctness and permit a reasonably complete description and diagnosis.

Leptochloa srilankensis N. Snow, sp. nov. **TYPE:** Sri Lanka. Northern Province, Vavuniya District, ca. 3 mi. SW of Nedunkani along the road to Puliyankulam, near mile post 21/3, 5 Dec. 1974, *Davidse & Sumithraarachchi 9066* (holotype, MO; isotypes, BRI, K, TAES, US). Figures 1, 2.

Haec species *Leptochloae decipienti* subsp. *astheni* similis, sed ligula trichomatibus apicalibus longis vestita, lamina foliari longitudinem centimetrorum quatuor non attingente, spicula perbrevis ex flosculis duabus tantum constante ac lemmatibus perlate ovatis differt.

Perennial. Culms erect or ascending to 60 cm tall, arising from knotted and cataphyll-bearing bases, the older bases persistent and sometimes resembling short rhizomes. Culms terete, 0.5–1.0 mm wide basally (excluding sheaths) to ca. 0.5 mm wide below panicle, solid but with soft central pith, sometimes branching below, glabrous. Internodes numerous, 0.6–1.0 cm long basally to ca. 14 cm long apically. Sheaths open, tightly involute upon drying, ca. 1.5 times length of lower internodes to ca. 0.80 times length of upper internodes, moderately pilose from small tuberculate bases, especially near collar, becoming glabrous with age. Ligule a short membrane topped by long (or rarely short) straight apical hairs 1.0–4.0 mm long. Leaf blades

narrowly lanceolate (adjectives sensu Systematics Association, 1962), somewhat cartilaginous at collar, ca. 3.0 mm wide at base, mostly less than 4.0 cm long, tightly involute upon drying, glabrous above and below. Inflorescence a panicle of spicate or racemose primary branches, up to 40 cm long fully exerted, ca. 5 cm wide basally to ca. 1 cm wide apically; panicle branches 15–20, 1.5–5.0 cm long, alternate, ascending to erect, slightly flexuous; rachis and branch axils glabrous. Spikelets 1.2–1.3(–1.7) mm long, distant to barely overlapping, \pm secund in two rows. Glumes 1-nerved, membranous, lanceolate, scabrous on keel, sometimes with fine longitudinal striations, the lower (0.7–)0.9–1.1 mm long, the upper 1.1–1.3 mm long and sometimes slightly exceeding upper floret. Florets 2 (rarely 3), the third floret when present often highly reduced. Rachilla between first and second floret strongly arched. Lemmas thinly membranous to hyaline, strongly keeled, very widely ovate (Fig. 2), 0.7–1.0 mm long, 3-nerved (lateral nerves visible only near base with high magnification), broadly acute at apex, sparsely sericeous along lower nerves to nearly glabrous. Palea subequal to lemma, hyaline, sparsely sericeous along veins. Anthers three, ca. 0.3 mm long. Stigmas two, plumose. Caryopsis elliptic in hilar profile, widely depressed obovate in cross section at midpoint, ungrooved or sometimes with a slight hilar depression, dark amber to light brown, smooth.

Chromosome number unknown. Details concerning lemmatal micromorphology have been published elsewhere (Snow, 1996, as *Leptochloa* “sp. nov.”).

Vernacular name. Srilankan sprangletop.

Leptochloa srilankensis is most easily confused with the eastern Australian endemic *L. decipiens* (R. Brown) Stapf ex Maiden subsp. *asthenes* (Roemer & Schultes) N. Snow (Snow, 1998) (formerly known as *L. ciliolata* (E. Jedwabnick) S. T. Blake; Lazarides, 1980; Simon, 1993). Specimens of *L. decipiens* subsp. *asthenes* with relatively short leaves

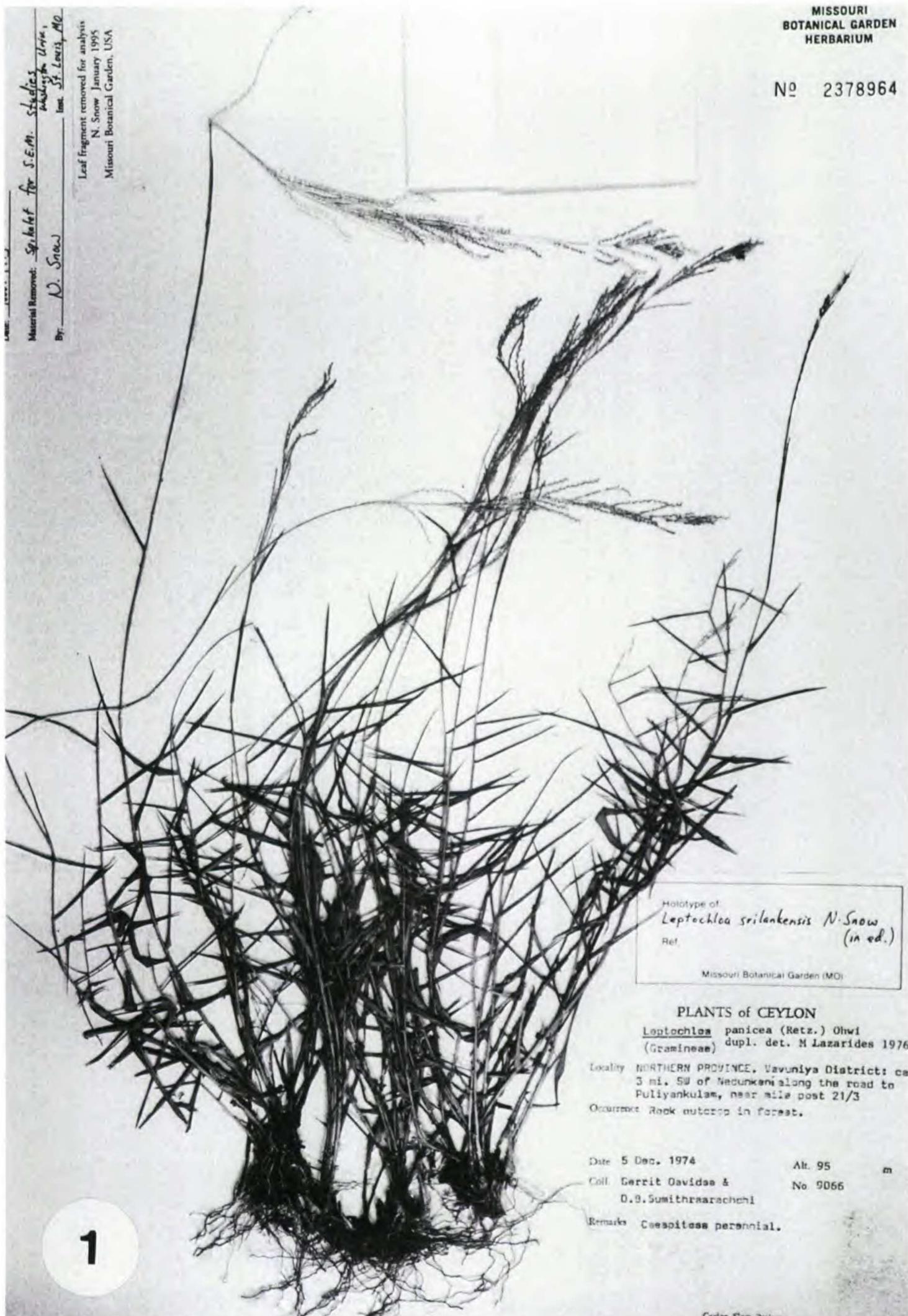


Figure 1. Holotype of *Leptochloa srilankensis* N. Snow, Davidse & Sumithraarachchi 9066 (MO).

and short panicle branches superficially resemble *L. srilankensis*, but the ciliate ligule, the long panicle, and the reduced number of florets are diagnostic characters. The dissimilarities of the two are summarized in Table 1.

The species also could be confused with *L. panicea* (A. J. Retzius) J. Ohwi subsp. *panicea* (sensu Snow, 1997), and some literature citations of spec-

imens here placed in *L. srilankensis* have been attributed to *L. panicea*. In his treatment of *Leptochloa* for Sri Lanka, Lazarides (1994: 301) included statements for *L. panicea* that clearly reflect the morphology of *L. srilankensis*, such as "...ligules ciliate with hairs up to 3 mm long. ..." and "...leaf sheaths tight, chartaceous with scarious margins, longer than the lower internodes and shorter than

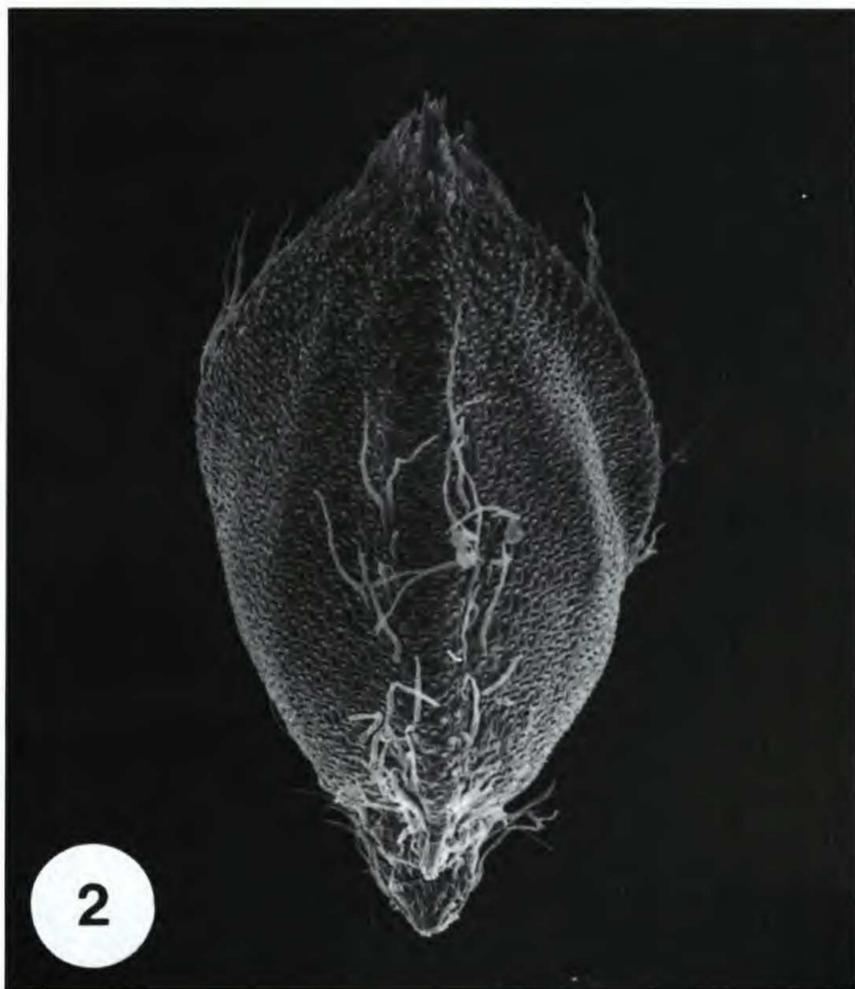


Figure 2. Scanning electron microscopy image of caryopsis-bearing lemma from holotype. Note widely ovate shape of lemma. (Scale: lemma length = 0.7 mm.)

the upper internodes." Two specimens of *L. panicea* cited for Sri Lanka by Lazarides (1994) (*Clayton 5591*, *Mueller-Dombois & Cooray 67121003*) are here presented as paratypes. Handwritten notes attached to certain specimens (*Clayton 5591*, TAES; *Fosberg et al. 50835*, K) indicate others had also recognized its distinctive morphology. Table 1 summarizes important diagnostic differences between these taxa.

The ecological distribution of *Leptochloa srilankensis* includes sandy soils in open areas of thornscrub, rock outcrops in forests, evergreen scrub,

and roadsides. The specific epithet *srilankensis* refers to its geographical distribution in Sri Lanka.

Since only five collections are known, additional attempts to collect the plant should be a priority and will serve to more accurately assess its conservation status. The author would greatly appreciate viable seed of this species in order to better document its biological attributes.

Paratypes. SRI LANKA. **Puttalam District:** Northwestern Province, Wilpattu National Park, Puttalam–Manar road, N from Marai villu, *Clayton 5591* (CANB, K, TAES); Wilpattu National Park, 2.5 mi. S of Maduru Odai, 5 mi. S of Marai Villu, Plat W 18, *Fosberg, Mueller-Dombois, Wirawan, Cooray & Balakrishnan 50835* (CANB, K); Ruhuna National Park, Block I opposite Karaugaswala, in evergreen scrub on sand, *Mueller-Dombois & Cooray 67121003* (PDA, POM); on Palatupan road near Rakinalwala on roadside, *Cooray 69111819R* (K).

Acknowledgments. The Missouri Botanical Garden (Andrew W. Mellon Foundation) and Washington University (Population and Evolutionary Biology Program) are acknowledged for their generous financial and logistical support over the past six years. The curators of BRI, CANB, K, POM, and TAES graciously sent material on loan. My thanks to Roy Gereau for the Latin diagnosis and to Mike Veith at the Electron Microscopy facility at Washington University. The comments of Mike Lazarides on an earlier draft were helpful. This paper represents a contribution toward the author's doctoral dissertation at Washington University (St. Louis).

Literature Cited

- Lazarides, M. 1980. The genus *Leptochloa* Beauv. (Poaceae, Eragrostideae) in Australia and Papua New Guinea. *Brunonia* 3: 247–269.
———. 1994. *Leptochloa*. Pp. 297–303 in M. D. Dassan-

Table 1. Diagnostic differences between *Leptochloa srilankensis*, *L. decipiens* subsp. *asthenes*, and *L. panicea* subsp. *panicea* (Snow, 1997).

	<i>L. srilankensis</i>	<i>L. decipiens</i> subsp. <i>asthenes</i>	<i>L. panicea</i> subsp. <i>panicea</i>
Habit	perennial	perennial	annual
Root crown	knotted	often knotted	not knotted
Upper internodes	elongated	short	short
Leaf blade length	< 4 cm	4–8 cm	3–25 cm long
Blade vestiture	glabrous	scabrous	tuberculate pilose
Leaf midrib	absent	generally absent, present in some	present
Ligule apex	long ciliate	erose	erose
Floret number	2(3)	3–4(7)	2–3
Lemma shape	very widely ovate	ovate	elliptic
Lemma apex	broadly acute	obtuse to emarginate	acute
Panicle length	always > ½ plant length	generally < ½ plant length	usually < ½ plant length
Distribution	Sri Lanka	New South Wales, Queensland	Africa, Asia

-
- ayake (editor), A Revised Handbook to the Flora of Ceylon, Vol VIII. Amerind Publishing, New Delhi.
- Simon, B. K. 1993. A Key to Australian Grasses, 2nd ed. Department of Primary Industries, Brisbane.
- Snow, N. 1996. The phylogenetic utility of lemmatal micromorphology in *Leptochloa* s.l. and related genera in subtribe Eleusininae (Poaceae, Chloridoideae, Eragrostidae). *Ann. Missouri Bot. Gard.* 83: 504–529.
- . 1997. Phylogeny and Systematics of *Leptochloa* P. Beauv. sensu lato (Poaceae, Chloridoideae). Ph.D. Dissertation, Washington University, St. Louis.
- . 1998. Nomenclatural changes in *Leptochloa* P. Beauvois sensu lato (Poaceae, Chloridoideae). *Novon* 8: 77–80.
- Systematics Association Committee for Descriptive Biological Terminology. 1962. I. Terminology of Simple Symmetrical Plane Shapes (Chart 1). *Taxon* 11: 145–156.